

Chapter 122: CHLORINE AND CHLORINE DIOXIDE EMISSION STANDARD

SUMMARY: The regulation establishes an emission limit for bleach plants of pulp and paper mills.

1. Scope

- A.** This regulation shall be applicable in all ambient air quality control regions in the State of Maine.
- B.** This regulation shall be applicable to all bleach plants of all existing pulp and paper making facilities.

2. Definitions. Bleach plant means the assembly of equipment, principally the mixers, chlorine and chlorine dioxide generators, towers and washers, used in the pulp and paper industry to carry out the bleaching process.

3. Emission Limitation

- A. Chlorine.** No person shall emit or cause to be emitted into the ambient air from all bleach plants of any pulp and paper making facility chlorine emissions greater than 3.0 pounds per hour.
- B. Chlorine Dioxide.** No person shall emit or cause to be emitted into the ambient air from all bleach plants of any pulp and paper making facility chlorine dioxide emissions greater than 3.0 pounds per hour.

4. Emission Test Plan. The owner or operator of any pulp and paper facility bleach plant shall prepare and submit to the Commissioner for approval a plan for performing tests required under this regulation. Such plan shall include , but is not limited to, test purpose, sampling locations, test method, sample analysis procedures, and quality assurance procedures. Emission test plans must be submitted within thirty (30) days of the emission test date.

5. Emission Test Schedule. Testing required pursuant to this regulation shall be conducted annually with selection of the test schedule subject to the Commissioner's approval. Additional testing may be required as the Commissioner deems necessary on the basis of the previous analysis, significant changes to the facility equipment or operation, an air emission exceedance of the limit specified in Section 3, repeated or long term equipment malfunction, or any new information determined to be significant by the Commissioner.

6. Test Methods and Procedures. The test method for measuring chlorine and chlorine dioxide emissions as reported in the National Council of the Paper Industry for Air and Stream Improvement, Technical Bulletin #520 and #548, April 1987 and June 1988 respectively or any other methods as approved by the Commissioner shall be used to determine compliance with this regulation.

7. Continuous Emission Monitoring. Any owner or operator of a pulp and paper making facility subject to the provisions of this regulation shall install, calibrate, operate and maintain in good working order a continuous emission monitoring system as approved by the Commissioner to monitor and record the concentration of total chlorine inclusive of chlorine dioxide. Continuous emissions monitoring data is to be retained by the pulp and paper making facility for a minimum of five years.

The records shall be available for inspection by the Department during normal business hours and copies shall be available to the Commissioner or his representative upon request.

This Section shall be effective upon the Commissioner's determination that continuous emission monitors for chlorine and chlorine dioxide are demonstrated as both available and reliable for the purpose of compliance determination. The affected facilities shall have 180 days from the Commissioner's decision to require continuous emission monitors to comply with this Section.

- 8. Emissions Control.** If scrubbers are employed to attain the emission limitations in Section 3, any owner, or operator of a pulp and paper facility subject to the provisions of this regulation shall install, calibrate, operate and maintain continuous scrubber recycle flow, Oxidation Reduction Potential (ORP), scrubber pressure drop, and pH meters. Other measurement methods that provide for a measure of scrubbing media chlorine and chlorine dioxide uptake ability may be utilized with the written permission of the Commissioner.

The recycle flow, ORP, scrubber pressure drop, and pH shall be recorded once per shift and retained by the pulp and paper making facility for a minimum of five years. The records shall be available for inspection by the Department during normal business hours and copies shall be available to the Commissioner or his representative upon request.

Operate, for the purpose of this section, means to have calibrated and in use for at least 90 percent of the time during each quarter.

- 9. Malfunctions.** The Department is authorized to exempt emissions occurring during periods of unavoidable malfunction or unplanned shutdown from civil penalty under Section 349, Subsection 2, if the malfunction was not caused, entirely or in part, by poor maintenance, careless operation, poor design or any other reasonably preventable condition. In such a case, the burden of proof shall be on the person seeking the exemption.

- 10. Effective Date.** The effective date of this regulation, unless otherwise specified, shall be October 1, 1992.

AUTHORITY: 38 M.R.S.A. Section 343-A and 585-B

EFFECTIVE DATE: February 28, 1990
Amended: February 25, 1992

BASIS STATEMENT

Chlorine is a yellow-greenish gas used in the bleaching of pulp and paper making facilities. Chronic exposure can damage teeth and irritate the lungs, causing bronchitis, coughing, and shortness of breath. Acute exposure to chlorine can severely burn the eyes and skin causing permanent damage, and may cause throat irritation, tearing, coughing, nose bleeds, and chest pain, pulmonary edema and death. Chlorine dioxide is a red-yellow gas also used in the bleaching of pulp. Like chlorine, chlorine dioxide is an extremely irritating gas and can be an inhalation poison.

The United States Environmental Protection Agency reports from its 1988 Toxic Release Inventory that approximately 2.9 million pounds of chlorine and 1.7 million pounds of chlorine dioxide were emitted by seven (7) pulp and paper making facilities in the State of Maine.

This rule establishes chlorine and chlorine dioxide emission limitations. It is important to note that with the renewal of these affected sources' air emission licenses, based on mill specific information, the Best Practical Treatment (BPT) determination may be more stringent.

In addition to the above Basis Statement, the Department has filed with the Secretary of State the response to representative comments received during the comment period.

BASIS STATEMENT FOR AMENDMENT OF JANUARY 8, 1992

The original rule required all applicable sources of chlorine and chlorine dioxide to implement control strategies necessary for compliance with the rule's emission limit no later than the effective date of June 1, 1992. This amendment extends the effective date for compliance with this regulation from June 1, 1992 to October 1, 1992.

On October 4, 1991, the Department received a petition for agency rulemaking filed by the Paper Industry Information Office on behalf of its member companies requesting an extension of the compliance date from June 1, 1992 to October 1, 1992 in Chapter 122.

The Department believes that the extension of the effective date of Chapter 122 from June 1, 1992 to October 1, 1992 is of such relative short duration that the loss of air quality benefits during that period are insignificant. The extension will allow industry the additional scheduling flexibility to take advantage of planned mill shutdowns and summer construction period. Allowing the four month extension of the effective date will provide a more cost effective implementation of chlorine and chlorine dioxide control.

The only public comments the Department received were from two pulp and paper making facilities in support of the proposed amendment.